



Iowa General Assembly

2007 Committee Briefings

Legislative Services Agency – Legal Services Division

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ENERGY EFFICIENCY STUDY COMMITTEE

Meeting Dates: [November 13, 2007](#) | [October 18, 2007](#)

Purpose. *This compilation of briefings on legislative interim committee meetings and other meetings and topics of interest to the Iowa General Assembly, written by the Legal Services Division staff of the nonpartisan Legislative Services Agency, describes committee activities or topics. The briefings were originally distributed in the Iowa Legislative Interim Calendar and Briefing. Official minutes, reports, and other detailed information concerning the committee or topic addressed by a briefing can be obtained from the committee's Internet page listed above, from the Iowa General Assembly's Internet page at <http://www.legis.state.ia.us>, or from the agency connected with the meeting or topic described.*

ENERGY EFFICIENCY STUDY COMMITTEE

November 13, 2007

Co-chairperson: Senator Robert Hogg

Co-chairperson: Representative Nathan Reichert

Overview. The primary focus of the Committee's second and final meeting concerned continued discussion with representatives from the Iowa Utilities Board (IUB) and Office of Consumer Advocate (OCA) regarding energy efficiency approaches and procedures, presentations relating to state and federal energy efficiency initiatives, a discussion of State Energy Code provisions and compliance issues, and the formulation of recommendations for submission to the General Assembly.

Energy Efficiency Approaches and Procedures

- **Iowa Utilities Board.** Ms. Krista Tanner, IUB member, remarked that discussions with energy industry representatives and officials from around the country indicate that Iowa ranks as a fairly progressive state regarding energy efficiency efforts and is doing comparatively well in energy efficiency endeavors.
- **Energy Efficiency Studies.** Ms. Joan Conrad, Legislative Liaison, IUB, and Mr. Gordon Dunn, Energy Efficiency Programs Specialist, IUB, provided updates regarding the status of two energy efficiency studies mandated by legislation enacted during the 2007 Legislative Session relating to the status and effectiveness of energy efficiency plans and programs offered by gas and electric utilities, and consumer knowledge of energy use, efficiency, and energy utilization reduction methods. With regard to the first study, Mr. Dunn summarized investor-owned electric and natural gas utility energy efficiency savings realized, cost-effectiveness calculations, and energy efficiency spending, and also distributed information relating to municipal and rural electric cooperative energy efficiency results and program highlights. Regarding the second study, Ms. Conrad stated that preliminary results indicate that a majority of survey respondents are generally knowledgeable about energy efficiency, are concerned about global warming and convinced it can be remedied, and view their utility provider as a credible source of energy efficiency-related information.
- **Office of Consumer Advocate.** Ms. Jennifer Easler, Attorney, OCA, accompanied by Mr. Joseph Murphy, Utility Administrator, OCA, characterized Iowa as at a critical juncture in efforts to enhance energy efficiency efforts, emphasized the cost-effectiveness of utility program offerings, agreed with Committee input that an improved home energy audit process would be valuable, contrasted electric versus natural gas industrial and residential customer energy efficiency participation levels, and identified energy efficiency lighting as having significant residential energy savings potential.
- **IUB and OCA Recommendations.** In response to a request by Committee members for specific recommendations, IUB and OCA staff suggested allocating additional money and offering additional incentives for existing energy efficiency programs and services which have been determined effective in order to achieve greater energy efficiency savings, providing guidance to the IUB in assessing savings realized from residential and commercial programs, requiring application of energy efficiency programs to all citizens of the state regardless of location or income level,

maintaining flexibility in structuring energy efficiency programs and services so that innovative programs can be implemented, and preserving current financial allocations to load management programs.

Both IUB and OCA staff participated in Committee discussion regarding the merits of load management programs, the cost of such programs, and their status as an energy efficiency program or measure; and the merits of third-party administration of required utility energy efficiency programs.

State and Federal Energy Efficiency Initiatives

- **Department of Energy.** Mr. Doug Seiter, Project Manager, United States Department of Energy (DOE), presented an overview of energy efficiency activities at the state and national level. Mr. Seiter stated that federal buildings should lead by example in energy efficiency construction and renovation, and described the mission and operation of the DOE's Building Technologies Program. He indicated that increasing energy efficiency and utilization of renewables in commercial buildings represents a substantial business opportunity, that potential returns from building-related energy efficiency efforts will continuously increase in the future, that there is increasing pressure on power utilities to reduce peak demand from the buildings sector, that there is growing awareness of building technologies as a key to disaster mitigation and recovery, and that commercial building provisions of the federal Energy Policy Act of 2005 can accelerate progress in energy efficiency effort and utilization of renewables. Mr. Seiter additionally described the concept of zero-net-energy commercial building construction, and summarized DOE's approach to improving building energy efficiency in the key areas of product research, market transformation, and mandatory regulations.
- **American Council for an Energy Efficient Economy.** Mr. Bill Prindle, Deputy Director, American Council for an Energy Efficient Economy (ACEEE), characterized energy efficiency as the "first fuel" for states. He indicated that energy efficiency does more for the economy than any energy resource; is the first response to high energy prices, capacity shortages, and carbon emission challenges; is a renewable resource which is always available; that implementation of energy efficiency endeavors requires policy action in addition to market factors; that states are the current leaders on energy policy and outspend the federal government by a ratio of three to one; and that new trends could drive energy efficiency to an even larger role in states' energy policy. Mr. Prindle presented investment figures indicating that national energy services infrastructure investment significantly exceeds energy supply infrastructure investment, noted the impact of energy efficiency investment on job creation, discussed key regulatory issues and national trends relating to energy efficiency, and indicated that Iowa ranks 13th based on an energy efficiency state scorecard developed by ACEEE and is well-positioned to improve its energy efficiency opportunities and thereby create a stronger state economy.
- **Center for Energy and Environment.** Mr. Sheldon Strom, Director, Center for Energy and Environment, described the operation of the center in providing energy services, conducting research projects, developing greenhouse gas reduction plans, and serving as a one-stop efficiency shop. He outlined the history of energy efficiency efforts in the state of Minnesota, and summarized the provisions of the state's Next Generation Act energy legislation including savings goals, applied research activities, financial incentive plans, decoupling pilot projects, and new conservation program strategy development. Mr. Strom stated that the paradigm shift from energy spending requirements to savings goals will be challenging for the state, that correctly establishing and implementing financial incentives and decoupling efforts will be crucial to the legislation's success, and that the legislation will result in a shift in emphasis from peak savings to energy savings, leading to greater overall savings in carbon dioxide levels.

State Energy Code and Compliance. Mr. Stuart Crine, Building Code Commissioner, Iowa Department of Public Safety, discussed the statutory basis for State Energy Code provisions, indicating that it adopts by reference the International Energy Conservation Code, 2006 edition, and varies in application depending upon the nature of a building as state owned or funded, the size and extent to which a building is heated or cooled, and whether a building is constructed in a political subdivision which has adopted a local building code. He noted that the State Energy Code is not applicable to new construction which is privately owned and financed, has less than 100,000 square feet of enclosed space, has more than 100,000 square feet or more of enclosed space but is not heated or cooled, and is located in a jurisdiction with no local building code. Mr. Crine additionally discussed the conducting of energy reviews and life cycle cost analyses, and characterized energy code enforcement efforts as primarily locally based if in fact a local building code or department exists and as inconsistently interpreted and applied.

Recommended policy options included application of the State Energy Code to all new construction in the state, providing training opportunities for local officials in energy code enforcement, providing resources for local enforcement regarding plan review and inspections, extending State Building Code inspection requirements to existing building additions, and requiring or providing incentives for enhanced energy conservation features exceeding International Energy Conservation Code requirements.

Recommendations

Committee members approved a motion supporting the following recommendations, in recognition of the essential impact of energy efficiency improvements in achieving energy independence, job stimulation and economic growth, and environmental improvement for the benefit of future generations:

1. Establish a statewide energy efficiency goal of a 1.5 percent per capita reduction in energy usage per year over a 10-year period, which, if achieved, would save Iowans \$9 billion over the 10-year period. The percentage reduction would be initially phased in over a three-year period. In the utility sector, the goal would be applicable to all utilities, utilities would be given flexibility in meeting the goal, incentives would be available for achieving the goal, and remedies applicable if the goal was not met.
2. Provide tax incentives for green building construction and rehabilitation.
3. Establish basic energy efficiency services on a statewide basis so they are available for all Iowa families and businesses.
4. Broaden the application of the state building code statewide and improve education, compliance, and enforcement aspects.
5. Require and assist with the financing of green building construction for public buildings, and provide additional incentives for green building construction in the private sector.
6. Assist with energy efficiency efforts aimed at lower-income individuals by fully funding the assessment and resolution program administered by community action agencies.
7. Improve transportation energy efficiency by requesting that the Office of Energy Independence coordinate with the Department of Transportation, other state agencies, and the transportation industry to make recommendations for improving transportation efficiency, including improving the fuel economy of the state's vehicle fleet.
8. Promote cogeneration of electricity to improve energy efficiency in electrical production by requesting that the Office of Energy Independence coordinate with the Iowa Utilities Board, other state agencies, and the energy industry to make recommendations for improving electricity production efficiency, such as cogeneration of electricity.
9. Improve workforce training to improve energy efficiency by requesting that state universities, private colleges, community colleges, building trades, and the building industry coordinate in the development of recommendations for improving the state's expanding energy efficiency workforce.
10. Encourage Iowa Power Fund investment in energy efficiency endeavors.
11. More fully integrate energy efficiency planning and programming efforts by utilities, including municipal utilities and rural electric cooperatives.
12. Establish a pilot project relating to third-party administration of required energy efficiency planning and programming by utilities.
13. Establish a statewide Energy Efficiency Summit involving public and private stakeholders focusing on cooperation and collaboration in energy efficiency programs and activities.
14. Establish an Energy Efficiency Advisory Council to advise and assist the Office of Energy Independence.
15. Require the Iowa Utilities Board to conduct an economic impact assessment relating to current and proposed energy efficiency plans and programs offered by utilities.
16. Promote better consumer education regarding energy efficiency alternatives, programs, opportunities, and benefits.
17. Continue efforts to evaluate and assess load management programs offered by utilities.
18. Facilitate easier implementation of energy efficiency programs from a customer standpoint, including maintaining a list of available contractors to assist in home energy audit recommendation implementation.

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ENERGY EFFICIENCY STUDY COMMITTEE

October 18, 2007

Co-chairperson: Senator Robert Hogg

Co-chairperson: Representative Nathan Reichert

Background. The Energy Efficiency Study Committee was authorized by the Legislative Council for two meeting dates during the 2007 Legislative Interim. The Committee's charge is to examine energy efficiency programs under the purview of the Iowa Utilities Board (IUB) and consider other proposals for improving energy efficiency in the state.

Overview. The primary focus of the Committee's first meeting concerned opening remarks presented at the outset of the meeting, review of IUB requirements and oversight in connection with energy efficiency efforts conducted by rate-regulated and nonrate-regulated gas and electric utilities, utility compliance with those requirements, energy reduction technology developments, energy efficiency efforts conducted by the business and industrial sectors, energy efficiency building construction concepts and technology, energy efficiency financing and investment options, and a perspective on energy efficiency from the incoming Director of the Office of Energy Independence.

Opening Remarks. Introductory comments by the Committee co-chairpersons included expression of the goal by Co-chairperson Hogg of achieving \$9 billion in energy savings over a 10-year period, with an annual reduction in energy usage of at least 1.5 percent. He suggested that the goal could be met through a combination of more effective energy efficiency education and improved state energy efficiency policies.

Iowa Utilities Board Requirements and Oversight.

- Ms. Joan Conrad, Legislative Liaison, IUB, provided a status report regarding two energy efficiency studies mandated by legislation enacted during the 2007 Legislative Session relating to the status and effectiveness of energy efficiency plans and programs offered by gas and electric utilities, and consumer knowledge of energy use, efficiency, and energy utilization reduction methods, respectively. She indicated that energy efficiency programs developed by Iowa utilities target the three specific areas of electric energy savings, natural gas savings, and electric peak demand savings; and summarized the statutory jurisdiction of IUB regarding energy efficiency and statutory requirements for investor-owned utility energy efficiency plans. Mr. Jack Clark, Vice President, Iowa Utility Association, and Ms. Jennifer Easler, Attorney, Office of Consumer Advocate, assisted Ms. Conrad in providing additional input regarding the development, review, and implementation process for the plans.
- Mr. John Perkins, Consumer Advocate, Office of Consumer Advocate, emphasized that it is the rate-paying utility customers who actually fund utility energy efficiency programs, that the Office of Consumer Advocate is the only authority statutorily mandated to represent consumer interests in relation to utilities, and that utilization of third-party entities to comply with statutory planning requirements and assist with program implementation might be cost-effective from the utilities' standpoint and objective from the standpoint of the customer.
- Mr. Gordon Dunn, Energy Efficiency Programs Specialist, IUB, distributed information summarizing electric energy, natural gas energy, and electric peak demand savings realized through implementation of utility energy efficiency plans. Mr. Dunn stated that the overriding goal in the planning process is cost-effectiveness, which includes consideration of ongoing future benefits in addition to and in comparison with current and future costs.

Energy Efficiency Plans — Utilities Perspective. Mr. Rick Leuthauser, Manager of Energy Efficiency, MidAmerican Energy; Ms. Sarah Else, Director of Renewable Energy Resources, Alliant Energy; Mr. Matt Daunis, Manager, Energy Efficiency Programs, Aquila; Mr. Regi Goodale, Director of Regulatory Affairs, Iowa Association of Electric Cooperatives; and Mr. Bob Haug, Executive Director, Iowa Association of Municipal Utilities, each informed Committee members regarding their respective entity's energy efficiency planning efforts and activities.

Energy Efficiency Technology. Mr. Floyd Barwig, Director, Iowa Energy Center, provided examples of potential energy efficiency savings in connection with buildings, transportation, industry, and power generation achievable through rapidly developing technological advances. He also discussed the development of alternative fuel automobiles, school buses, and locomotives, and the advantage of colocation of manufacturing facilities. Mr. Tommi Makila, Policy Planner, Energy and Waste Bureau, Department of Natural Resources (DNR), supplemented the presentation with a brief overview of energy efficiency program strategies being pursued by other states.

Business and Industry.

- Mr. Brent Kramer, Manager, New Product Development and Facilities, Whirlpool Amana Division, emphasized that Whirlpool is committed to energy and water efficiency across a value chain that includes product design, manufacturing, distribution, and end-of-product useful life disposal. Mr. Kramer advocated the offering of incentives for discontinuation of outmoded appliances; sales tax exemptions for energy-efficient appliances; and the forging of partnerships between industry, government, environmental interest groups, utilities, and retailers as strategies for increasing energy efficiency.
- Mr. Dell Collins, Director of Facilities, Vermeer Manufacturing, summarized recent energy improvements made at the company and indicated that such efforts must compete for capital allotment from limited financial resources. He recommended that facilitating education for companies regarding energy efficiency opportunities, establishing a clearinghouse or preapproved listing of energy efficiency consultants and resources, and providing financial incentives for energy conservation programs not directly tied to utilities would provide needed assistance and encouragement to businesses engaged in energy efficiency efforts.
- Mr. Tim Wilkinson, Vice President, ALCOA Company, provided an overview of the company's status as a supplier of aluminum sheet and plate, and described internal energy efficiency programs employed by the company which have resulted in significant electrical energy consumption reductions. Mr. Wilkinson stated that, having successfully achieved energy efficiency objectives, the impact of subsidizing rate-regulated utility's energy efficiency plans as required by statute negatively impacts the company financially. He accordingly advocated for an IUB-granted exemption for large industrial customers who have a high load factor and have made a significant effort to identify, evaluate, and implement cost-effective energy efficiency measures.
- Mr. Jim Henter, President, Iowa Retail Federation, provided information regarding the federal Energy Star Designation Program, stated that citizens of this state should be encouraged to purchase appliances with the designation, and suggested implementing an energy star sales tax holiday for a specified period of time to facilitate such purchases.

Energy-Efficient Building Construction.

- Ms. Kate Schwennsen, Associate Dean, College of Design, ISU, discussed energy consumption and efficiency challenges and concepts applicable to buildings. Ms. Schwennsen indicated that residential, commercial, and industrial buildings contribute approximately 43 percent of carbon dioxide emissions into the atmosphere, and that building design, construction, materials, and operation consumes more energy than any other part of the nation's economy. She also indicated that during the next 30 years, three-quarters of the built environment will be either new or renovated, creating an unprecedented opportunity to incorporate green building design concepts into building construction. Ms. Schwennsen summarized green building design elements and their benefits.
- Mr. Mike Carroll, Vice President, The Hansen Company, and Chairperson, Master Builders of Iowa, observed a trend from a contractor's perspective of prospective owners interested in and asking for energy efficiency and sustainable design features in construction projects. Mr. Carroll discussed the requirements of the Leadership in Energy and Environmental Design (LEED) Green Building Rating System developed and administered by the United States Green Building Council, and suggested that encouraging, rather than mandating, sustainable and energy efficient building designs which meet LEED certification requirements will promote green building design while minimizing potential subjectivity leading to narrowly missed project certification in some instances.
- Mr. Jim Lee, Engineer, Shive-Hattery, discussed the evolution of energy code development and adoption in the state, and cited outdated forms and lack of review personnel as obstacles to participation in audit programs and loan qualification processes. He also indicated that the energy efficiency savings derived from a building has as much to do with the building's operation as its construction, and that some form of monitoring on an ongoing basis to ensure effective and efficient building operation is needed.
- Mr. Dave Harvey, Director, Control Technology Solutions, cited a large need for energy efficiency retrofits of existing public buildings, and described the operation and merits of a performance-based energy efficiency contracting process incorporating competitive bidding and a written guarantee of energy and operational costs savings.
- Ms. Flora Schmidt, Executive Director, Home Builders Association of Iowa, stated that while residential construction techniques have significantly improved the efficiency of newly constructed homes, most Iowans reside in housing constructed prior to 1980. She advocated voluntary compliance with green building concepts and technology and called for enhanced consumer energy efficiency education, noting that consumers need to be aware of energy efficiency efforts and motivated to utilize them.
- Mr. Don Otto, Owner, DPO Construction, indicated that energy efficiency can be enhanced by insulating under basement floors in new homes up to a specified standard, called for the performance of energy audits for existing homes, and advocated requiring appraisers to place a value on energy upgrades for both new and existing home construction. He suggested tax incentives, utility rebates, and building code revisions to encourage or facilitate these measures, and provided examples of new home construction resulting in significantly lower energy costs.

Energy Efficiency Financing and Investment.

- Mr. Makila discussed the statutory requirements relating to the Energy Bank Program, indicating that the program is intended to assist with the financing of only cost-effective energy efficiency and renewable energy measures. Mr. Makila summarized a process beginning with a preliminary energy assessment, progressing to an energy audit or technical engineering analysis, and ending with financing either through private lending institutions or on a client-financed basis. He cited energy assessment study costs, lack of financial incentives, and diminished marketing ability by DNR staff, as hindering the program's reach and effectiveness.
- Mr. Barwig addressed the operation of the Alternate Energy Revolving Loan Program, which encourages development of alternate energy production facilities in the state. Mr. Barwig indicated that the program involves a revolving fund structure, competitive application process, matching funds, managed partnerships with the banking community, and owner reporting requirements.
- Ms. Sharon Presnall, Senior Vice President, Government Relations, Iowa Bankers Association, and Ms. Elizabeth Grob, Attorney, Ahlers & Cooney, P.C., discussed financing aspects of Iowa Energy Bank projects. Ms. Presnall stated that these projects are widely viewed within the banking industry as relatively easy and low-risk, and described the most common financing options or combinations entered into by school districts constructing new buildings or with existing buildings undergoing energy efficiency upgrades or retrofits. Suggestions for encouraging Energy Bank financed projects included providing zero percent financing to school districts to complete energy audits, proper marketing of the program to appropriate user groups, provision of funding to recommission preexisting mechanical systems, LEED certification incentives, and authorizing utilization of the board-approved physical plant and equipment levy to repay energy notes.

Office of Energy Independence. Ms. Roya Stanley, Director of the newly created Office of Energy Independence, provided an overview of energy efficiency in the state. Ms. Stanley expressed a commitment that the state lead by example in building energy efficiency by overcoming a lack of technical information and financing to deliver programs that provide technical integrity and transparency. She identified policy options relating to energy efficiency resource standards,

combined heat and power, building energy codes, transportation policies, appliance and equipment efficiency standards, and tax incentives; summarized statutory authority relating to energy efficiency and Executive Order 41 establishing performance measures and goals for energy reduction efforts; and outlined various areas where the state has an opportunity to expand upon and build energy efficiency programs and policies.

Next Meeting. The second of the two authorized Committee meetings is scheduled to be conducted on November 13, 2007, in the Supreme Court Chamber at the Statehouse.

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